

SUBSTITUTE ABSTRACT

A turbo-molecular pump of high safety and reliability was presented, so that if an abnormal condition should develop on the rotor side, it will not lead to any damage to the stationary portions such as the stator or pump casing to cause loss of vacuum in a vacuum processing system. The turbo-molecular pump includes a rotor; a stator assembly surrounding the rotor; and a casing portion surrounding the stator assembly, wherein at least a partial clearance is formed between the stator assembly and the casing portion, so that, when an abnormal torque is applied from the rotor to the stator assembly, direct impact transmission is prevented from the stator assembly to the casing portion.